

FW-04201
Superseding
FW-04201
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SECTION 04201 - MASONRY

PART 1 - GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 82 (1990a) Steel Wire, Plain, for
Concrete Reinforcement

ASTM C 90 (1981; R 1991) Load-Bearing
Concrete Masonry Units

ASTM C 270 (1992) Mortar for Unit Masonry

1.2 HANDLING AND STORAGE

All materials shall be handled, stored, and protected in an approved manner to avoid chipping, breakage, contact with soil or contaminating material, and exposure to the elements.

PART 2 - PRODUCTS

2.1 CONCRETE MASONRY UNITS

Concrete masonry units shall be normal weight units conforming to ASTM C 90, Type I, Grade N-I. Units shall be modular in size and include closer, bond-beam units and special shapes and sizes, required to complete the work indicated.

2.2 MORTAR

Mortar shall comply with the proportioning specifications for Type S mortar as specified in ASTM C 270. Mortar not used or that has started to set within 2-1/2 hours after mixing shall be discarded.

2.3 JOINT REINFORCEMENT

Joint reinforcement shall be factory-fabricated steel wire conforming to ASTM A 82, welded construction. Reinforcement shall be truss design, zinc-coated, with all wires not lighter than 9 gauge. See Specification Section 03200 Concrete Reinforcement for bar reinforcement requirements.

2.4 WATER

Water for mortar mixing shall be clean, potable, and shall not contain substances injurious to the mortar or that would cause staining.

PART 3 - ERECTION

3.1 INSTALLATION

Masonry shall be laid by masonry mechanics. No unit having a film of water or frost on its surface shall be laid. Masonry shall be laid in running bond, plumb, true to line, with level courses accurately spaced. Bond pattern shall be kept plumb throughout. Corners shall be plumb and true. Wherever possible, full units of the proper size shall be used in lieu of cut units. Cut edges shall be clean, true, and sharp. Vertical joints shall be shoved tight. Each unit shall be adjusted to final position while mortar is still soft and plastic. Any unit that is disturbed after mortar has stiffened shall be removed and relaid with fresh mortar. Before laying new work, loose mortar shall be removed and exposed joints of unfinished masonry walls shall be thoroughly cleaned. Joints shall be 3/8-inch wide unless otherwise indicated or specified, and shall be struck flush with surface of masonry unit when the mortar is thumbprint hard. The joints shall be finished to uniformly straight and true lines and smooth surfaces. One cell of two-cell units and two cells of three-cell units on each side of wall terminations shall be filled solid with grout, mortar, or concrete for full height of openings.

3.1.1 Hot-Weather Installation

Masonry erected when the ambient air has a temperature of more than 99 degrees F, in the shade, and has a relative humidity of less than 50 percent shall be protected from direct exposure to wind and sun for 48 hours after installation.

3.1.2 Cold-Weather Installation

No frozen work shall be built upon. Before erecting masonry during temperatures below 40 degrees F, a written statement shall be submitted and approval shall be received of the methods proposed to heat the masonry materials and protect the masonry from freezing.

3.2 POINTING AND CLEANING

Mortar daubs or splashings, before setting or hardening, shall be completely removed from masonry-unit surfaces. Before completion of the work, all defects in joints of masonry to be shall be raked out as necessary, filled with mortar, and tooled to match existing joints. Masonry surfaces shall not be cleaned, other than removing excess surface mortar, until mortar in joints has hardened. Masonry surfaces shall be left clean, free of mortar daubs, dirt, stain, and discoloration, including scum from cleaning operations, and with tight mortar joints throughout. Metal tools and metal brushes shall not be used for cleaning. Concrete masonry unit surfaces shall be dry-brushed at the end of each day's work and after any required pointing.

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